

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Previously Presented) A pulse tube refrigerator (PTR) arrangement comprising a pulse tube and a regenerator tube within a cryogenic apparatus, wherein:

the regenerator tube is finned; and

a plurality of fins associated with the regenerator tube are arranged along the regenerator tube to transfer heat from an atmosphere surrounding said tubes to the regenerator tube.

Claim 2. (Previously Presented) A PTR arrangement according to claim 1, wherein the regenerator tube is finned across part of its length.

Claim 3. (Currently Amended) A PTR arrangement according to claim 4, wherein:

the PTR arrangement comprises two stages, ~~each stage having a pulse tube and a regenerator tube;~~ and

the second stage regenerator tube is finned.

Claim 4. (Currently Amended) A PTR arrangement according to claim 1, wherein the PTR arrangement is a multi-stage PTR arrangement, each stage having a pulse tube and a regenerator tube.

Claim 5. (Original) A PTR arrangement according to claim 1, wherein the regenerator tube is fabricated from a thin walled alloy which has a moderate thermal conductivity at low temperatures.

Claim 6. (Original) A PTR arrangement according to claim 1, wherein the fins comprise annular fins.

Claim 7. (Original) A PTR arrangement according to claim 6, wherein the annular fins are spaced apart regularly, along an outside of the regenerator tube.

Claim 8. (Original) A PTR arrangement according to claim 6, wherein the annular fins are not of a uniform size.

Claim 9. (Original) A PTR arrangement according to claim 1, wherein the fins comprise one or more spirally arranged strip sheets.

Claim 10. (Original) A PTR arrangement according to claim 1, wherein the fins comprise outwardly extending prongs.

Claim 11. (Original) A PTR arrangement according to claim 1, wherein the fins comprise rectangular sheets attached about the circumference of the

regenerator tube, the sheets being attached along one edge to the regenerator tube.

Claim 12. (Previously Presented) A PTR arrangement according to claim 1, wherein the regenerator tube is corrugated, either axially with respect to an axis of the tube or perpendicularly with respect to said axis, corrugations of said regenerator tube forming fins which comprise part of a wall of the regenerator tube.

Claim 13. (Original) A PTR arrangement according to claim 1, wherein the fins comprise one or more types of fin.

Claim 14. (Previously Presented) A PTR arrangement according to claim 1, wherein the pulse tube has an insulated wall.

Claim 15. (Previously Presented) A PTR arrangement according to claim 1, wherein the PTR arrangement is associated with a magnetic resonance imaging apparatus.

Claim 16. (Currently Amended) A method of operating a pulse tube refrigerator (PTR) arrangement comprising a pulse tube and a regenerator tube within a cryogenic apparatus, wherein the regenerator tube is finned, the method comprising:

providing the PTR arrangement with a refrigerator sock containing a helium column that constitutes an atmosphere ~~surrounds~~ surrounding said tubes; and

transferring heat from said atmosphere to the regenerator tube via fins associated with the regenerator tube.

Claim 17. (Previously Presented) A method according to claim 16 wherein the PTR arrangement is associated with a magnetic resonance imaging apparatus.